Burnham & Morrill Company
Cumberland County
Portland, Maine
A-77-71-H-A/R

Departmental
Findings of Fact and Order
Air Emission License

After review of the air emissions license application, staff investigation reports and other documents in the applicant's file in the Bureau of Air Quality, pursuant to 38 M.R.S.A., Section 344 and Section 590, the Department finds the following facts:

I. REGISTRATION

A. Introduction

1. Burnham & Morrill Company (B&M) of Portland, Maine has applied to renew their Air Emission License permitting the operation of emission sources associated with their food products facility.

2. B&M has requested an amendment to their license in order to remove one older boiler and add two modern boilers and two emergency generators.

B. Emission Equipment
B&M is licensed to operate the following equipment:

Fuel Burning Equipment

Equipment	Maximum Capacity (MMBtu/hr)	Date of Manuf.	Date of Installation	Fuel Type, % sulfur	Stack #
Boiler #1	39.0	1956	1956	Nat. Gas / #6 fuel oil, 0.5%	1
Boiler #3*	31.4	1997	2002	Nat. Gas / #6 fuel oil, 0.5%	2
Boiler #4*	31.4	1997	2002	Nat. Gas / #6 fuel oil, 0.5%	2

* Boilers #3 and #4 are new to this license.

Electrical Generation Equipment

Equipment	Power Output (kW)	Heat Input (MMBtu/hr)	Firing Rate (gal/hr)	Fuel Type, % sulfur
Generator #1*	75	0.73	5.3	diesel, 0.05%
Generator #2*	230	2.24	16.4	diesel, 0.05%

*Generators #1 and #2 are new to this license.

B&M also operates two Safety Kleen parts cleaners.

C. Application Classification

The modification of a minor source is considered a major modification based on whether or not expected emission increases exceed the "Significant Emission Levels" as given in Maine's Air Regulations. The emission increases are determined by subtracting the current licensed emissions preceding the modification from the maximum future licensed allowed emissions, as follows:

Pollutant	**Current License (TPY)**	**Future License (TPY)**	**Net Change (TPY)**	**Sig. Level**
PM	21.1	26.8	5.7	100
PM_{10}	21.1	26.8	5.7	100
SO_2	98.8	28.2	-70.6	100
NO_x	44.7	61.4	16.7	100
CO	20.4	27.8	7.4	100
VOC	6.8	2.0	-4.8	50

This license is determined to be a renewal with a minor modification and has been processed as such.

II. BEST PRACTICAL TREATMENT (BPT)

A. Introduction

In order to receive a license the applicant must control emissions from each unit to a level considered by the Department to represent Best Practical Treatment (BPT), as defined in Chapter 100 of the Department regulations. Separate control requirement categories exist for new and existing equipment as well as for those sources located in designated non-attainment areas.

BPT for new sources and modifications requires a demonstration that emissions are receiving Best Available Control Technology (BACT), as defined in Chapter 100 of the Air Regulations. BACT is a top-down approach to selecting air emission controls considering economic, environmental and energy impacts.

BPT for existing emissions equipment means that method which controls or reduces emissions to the lowest possible level considering:

- the existing state of technology;
- the effectiveness of available alternatives for reducing emission from the source being considered; and
- the economic feasibility for the type of establishment involved.

B. Boiler #1

Boiler #1 was previously licensed. It is being maintained for back-up purposes. B&M operates a smoke density monitor on the breaching of Boiler #1 as a boiler operator tool. This boiler exhausts to a 150-foot stack.

Boiler #1 was installed in 1956 and is therefore not subject to the New Source Performance Standards (NSPS) Subpart Dc for steam generating units greater than 10 MMBtu/hr manufactured after June 9, 1989.

A summary of the BPT analysis for Boiler #1(39.0 MMBtu/hr) is the following:

1. The total fuel oil use for the facility shall not exceed 750,000 gal/year of #6 fuel oil, based on a 12-month rolling total, with a maximum sulfur content not to exceed 0.5% by weight.
2. The total natural gas usage for the facility shall not exceed 600 MMscf/year based on a 12-month rolling total.
3. Chapter 106 regulates fuel sulfur content, however in this case BPT for SO_2 was determined to be a more stringent limit of 0.5% and shall be used.
4. Chapter 103 regulates PM emission limits. The PM_{10} limits are derived from the PM limits.
5. NO_x emission limits are based on data from similar #6 / natural gas fired boilers of this size and age.
6. CO and VOC emission limits are based upon AP-42 data dated 9/98.
7. Visible emissions from Boiler #1 shall not exceed 30% opacity on a 6-minute block average, except for no more than (2) six-minute block averages in a continuous 3-hour period.

C. Boilers #3 and #4

Boilers #3 and #4 are new to this license and are being installed for primary process steam and facility heating needs. Boilers #3 and #4 exhaust to a common 100-foot stack.

Boilers #3 and #4 were each manufactured in 1997 with a maximum input heat capacity of 31.4 MMBtu/hr. They are therefore subject to the New Source Performance Standards (NSPS) Subpart Dc for steam generating units greater than 10 MMBtu/hr manufactured after June 9, 1989.

A summary of the BACT analysis for Boilers #3 and #4 is the following:

1. The total fuel oil use for the facility shall not exceed 750,000 gal/year of #6 fuel oil, based on a 12-month rolling total, with a maximum sulfur content not to exceed 0.5% by weight.
2. The total natural gas usage for the facility shall not exceed 600 MMscf/year based on a 12-month rolling total.

3. NSPS Subpart Dc regulates SO_2 emissions.
4. Chapter 103 regulates PM emission limits. The PM_{10} limits are derived from the PM limits.
5. NO_x emission limits are based on data from similar #6 / natural gas fired boilers of this size and age.
6. CO and VOC emission limits are based upon AP-42 data dated 9/98.
7. Visible emissions from the combined stack shall not exceed 20% opacity on a 6-minute block average, except for no more than (1) six-minute block average of not more than 27% opacity in a continuous 1-hour period.
8. B&M shall comply with all requirements, including the recordkeeping and reporting requirements, of 40 CFR Part 60, Subpart Dc for Boilers #3 and #4.

D. Generators

B&M operates two back up emergency diesel generators.

"Emergency" is defined in Chapter 100 and throughout this document as: "… any situation arising from sudden and reasonably unforeseeable events beyond the control of the source, including acts of God, which situation requires immediate corrective action to restore normal operation, and that causes the source to exceed a technology based emission limitation under the license, due to unavoidable increases in emissions attributable to the emergency. An emergency shall not include noncompliance to the extent caused by improperly designed equipment, lack of preventative maintenance, careless or improper operation, or operator error."

A summary of the BACT analysis for Generator #1 (75 kW) and Generator #2 (230 kW) is the following:

1. The emergency generators shall each be limited to 500 hr/yr of operation based on a 12-month rolling total. Compliance shall be demonstrated by a written log of all generator operating hours.
2. These generators are only to be operated for emergencies, as defined above, and as needed for routine maintenance of the generator itself.
3. The emergency generators shall fire only diesel fuel with a sulfur limit not to exceed 0.05% by weight.
4. Chapter 106 regulates fuel sulfur content, however in this case a BACT analysis for SO_2 determined a more stringent limit of 0.05% was appropriate and shall be used.
5. The PM and PM_{10} limits are derived from Chapter 103.
6. NO_x, CO, and VOC emission limits are based upon AP-42 data dated 10/96.
7. Visible emissions from the generators shall not exceed 20% opacity on a 6-minute block average, except for no more than (2) six-minute block averages in a continuous 3-hour period.

E. Annual Emission Restrictions

B&M shall be restricted to the following annual emissions, based on a 12 month rolling total:

Total Allowable Annual Emission for the Facility
(used to calculate the annual license fee)

Pollutant	**Tons/Year**
PM	26.8
PM_{10}	26.8
SO_2	28.2
NO_x	61.4
CO	27.8
VOC	2.0

Based on the firing of:

- 750,000 gallons of #6 fuel oil (0.5% sulfur) in Boilers #1, #3, or #4
- 600 million scf of natural gas in Boilers #1, #3, or #4
- Generators #1 and #2 operating 500 hours per year, each.

III. AMBIENT AIR QUALITY ANALYSIS

B&M previously submitted an ambient air quality analysis demonstrating that emissions from the facility, in conjunction with all other sources, do not violate ambient air quality standards. The Department determined that an additional ambient air quality analysis for this amendment / renewal was not required.

ORDER

Based on the above Findings and subject to conditions listed below, the Department concludes that the emissions from this source:

- will receive Best Practical Treatment,
- will not violate applicable emission standards,
- will not violate applicable ambient air quality standards in conjunction with emissions from other sources.

The Department hereby grants Air Emission License A-77-71-H-A/R subject the following conditions:

(1) Employees and authorized representatives of the Department shall be allowed access to the licensee's premises during business hours, or any time during which any emissions units are in operation, and at such other times as the Department deems necessary for the purpose of performing tests, collecting samples, conducting inspections, or examining and copying records relating to emissions.

(2) The licensee shall acquire a new or amended air emission license prior to commencing construction of a modification, unless specifically provided for in Chapter 115.

(3) Approval to construct shall become invalid if the source has not commenced construction within eighteen (18) months after receipt of such approval or if construction is discontinued for a period of eighteen (18) months or more. The Department may extend this time period upon a satisfactory showing that an extension is justified, but may condition such extension upon a review of either the control technology analysis or the ambient air quality standards analysis, or both.

(4) The licensee shall establish and maintain a continuing program of best management practices for suppression of fugitive particulate matter during any period of construction, reconstruction, or operation which may result in fugitive dust, and shall submit a description of the program to the Department upon request.

(5) The licensee shall pay the annual air emission license fee to the Department, calculated pursuant to Title 38 M.R.S.A. §353.

(6) The license does not convey any property rights of any sort, or any exclusive privilege.

(7) The licensee shall maintain and operate all emission units and air pollution systems required by the air emission license in a manner consistent with good air pollution control practice for minimizing emissions.

(8) The licensee shall maintain sufficient records to accurately document compliance with emission standards and license conditions and shall maintain such records for a minimum of six (6) years. The records shall be submitted to the Department upon written request.

(9) The licensee shall comply with all terms and conditions of the air emission license. The filing of an appeal by the licensee, the notification of planned changes or anticipated noncompliance by the licensee, or the filing of an application by the licensee for a renewal of a license or amendment shall not stay any condition of the license.

(10) The licensee may not use as a defense in an enforcement action that the disruption, cessation, or reduction of licensed operations would have been necessary in order to maintain compliance with the conditions of the air emission license.

(11) In accordance with the Department's air emission compliance test protocol and 40 CFR Part 60 or other method approved or required by the Department, the licensee shall:

(i) perform stack testing to demonstrate compliance with the applicable emission standards under circumstances representative of the facility's normal process and operating conditions:

a. within sixty (60) calendar days of receipt of a notification to test from the Department or EPA, if visible emissions, equipment operating parameters, staff inspection, air monitoring or other cause indicate to the Department that equipment may be operating out of compliance with emission standards or license conditions; or

b. pursuant to any other requirement of this license to perform stack testing.

(ii) install or make provisions to install test ports that meet the criteria of 40 CFR Part 60, Appendix A, and test platforms, if necessary, and other accommodations necessary to allow emission testing; and

(iii) submit a written report to the Department within thirty (30) days from date of test completion.

(12) If the results of a stack test performed under circumstances representative of the facility's normal process and operating conditions indicate emissions in excess of the applicable standards, then:

(i) within thirty (30) days following receipt of such test results, the licensee shall re-test the non-complying emission source under circumstances representative of the facility's normal process and operating conditions and in accordance with the Department's air emission compliance test protocol and 40 CFR Part 60 or other method approved or required by the Department; and

(ii) the days of violation shall be presumed to include the date of stack test and each and every day of operation thereafter until compliance is demonstrated under normal and representative process and operating conditions, except to the extent that the facility can prove to the satisfaction of the Department that there were intervening days during

which no violation occurred or that the violation was not continuing in nature; and

(iii) the licensee may, upon the approval of the Department following the successful demonstration of compliance at alternative load conditions, operate under such alternative load conditions on an interim basis prior to a demonstration of compliance under normal and representative process and operating conditions.

(13) Notwithstanding any other provisions in the State Implementation Plan approved by the EPA or Section 114(a) of the CAA, any credible evidence may be used for the purpose of establishing whether a person has violated or is in violation of any statute, regulation, or Part 70 license requirement.

(14) The licensee shall maintain records of malfunctions, failures, downtime, and any other similar change in operation of air pollution control systems or the emissions unit itself that would affect emission and that is not consistent with the terms and conditions of the air emission license. The licensee shall notify the Department within two (2) days or the next state working day, whichever is later, of such occasions where such changes result in an increase of emissions. The licensee shall report all excess emissions in the units of the applicable emission limitation.

(15) Upon written request from the Department, the licensee shall establish and maintain such records, make such reports, install, use and maintain such monitoring equipment, sample such emissions (in accordance with such methods, at such locations, at such intervals, and in such a manner as the Department shall prescribe), and provide other information as the Department may reasonably require to determine the licensee's compliance status.

(16) **Boiler #1**

A. Boiler #1 shall fire only #6 fuel oil with a sulfur content not to exceed 0.5% or natural gas.

B. Emissions shall not exceed the following:

Equipment		**PM**	**PM_{10}**	**SO_2**	**NO_x**	**CO**	**VOC**
Boiler #1 (oil)	lb/MMBtu	0.20	-	-	-	-	-
	lb/hr	7.80	7.80	19.50	19.50	1.30	0.07
Boiler #1 (gas)	lb/MMBtu	0.05	-	-	-	-	-
	lb/hr	1.95	1.95	-	3.79	3.18	0.21

C. Visible emissions from Boiler #1 shall not exceed 30% opacity on a 6-minute block average, except for no more than (2) six-minute block averages in a continuous 3-hour period.

(17) **Boilers #3 and #4**

A. Boilers #3 and #4 shall fire only #6 fuel oil with a sulfur content not to exceed 0.5% or natural gas.

B. Emissions shall not exceed the following:

Equipment		**PM**	**PM_{10}**	**SO_2**	**NO_x**	**CO**	**VOC**
Boiler #3 (oil)	lb/MMBtu	0.12	-	-	-	-	-
	lb/hr	3.77	3.77	15.70	9.42	1.05	0.06
Boiler #3 (gas)	lb/MMBtu	0.05	-	-	-	-	-
	lb/hr	1.57	1.57	-	3.05	2.56	0.17
Boiler #4 (oil)	lb/MMBtu	0.12	-	-	-	-	-
	lb/hr	3.77	3.77	15.70	9.42	1.05	0.06
Boiler #4 (gas)	lb/MMBtu	0.05	-	-	-	-	-
	lb/hr	1.57	1.57	-	3.05	2.56	0.17

C. Visible emissions from the combined stack shall not exceed 20% opacity on a 6-minute block average, except for no more than (1) six-minute block average of not more than 27% opacity in a continuous 1-hour period.

D. For periods of oil firing, B&M shall operate a Spec 1 Continuous Opacity Monitor (COM) for measuring the opacity of the emissions discharged to the atmosphere and record the output of the system. Operation of a COM is not required for periods of natural gas firing.

E. B&M shall comply with all applicable requirements, including the recordkeeping and reporting requirements, of 40 CFR Part 60, Subpart Dc for Boilers #3 and #4

(18) **Fuel Limits**

A. The total fuel oil use for the facility shall not exceed 750,000 gal/year of #6 fuel oil, based on a 12-month rolling total, with a maximum sulfur content not to exceed 0.5% by weight. Fuel records, including gallons used and percent sulfur, shall be maintained on a monthly basis, in addition to the 12-month rolling total.

B. The total natural gas usage for the facility shall not exceed 600 MMscf/year based on a 12-month rolling total. Fuel records, including scf fired, shall be maintained on a monthly basis, in addition to the 12-month rolling total.

(19) **NSPS Requirements**

Boilers #3 and #4 are subject to Federal New Source Performance Standards, Subpart Dc. B&M shall comply with all requirements of 40 CFR Part 60, Subpart Dc including, but not limited to, the following:

A. B&M shall submit notification to EPA of the date of construction, anticipated start-up, and actual start-up. This notification shall include the design heat input capacity of the boilers and the type of fuel to be combusted.
B. B&M shall perform and submit to EPA and the Department an initial performance test within 30 days after achieving the maximum production rate at which the facility will be operated but not later than 180 days after the initial start-up of the facility.
C. The initial performance test for sulfur content shall consist of sampling and analyzing the oil in the initial tank of oil to be fired in the boilers to demonstrate that the oil contains 0.5% or less sulfur by weight.
D. The initial performance test for opacity shall consist of testing done in accordance with Method 9.
E. B&M shall submit to the Department and EPA the performance test data from the initial performance tests and any subsequent tests.
F. Prior to firing fuel oil in Boilers #3 and #4, B&M shall install, calibrate, maintain, and operate a Continuous Opacity Monitor (COM) for measuring the opacity of the emissions discharged to the atmosphere and record the output of the system. The COMs shall be operated in accordance with the applicable procedures under Appendix B, Performace Specification 1 and MEDEP Chapter 117.
G. B&M shall record and maintain records of the amounts of each fuel combusted during each day.
H. B&M shall submit to EPA and the Department a Fuel Oil Sulfur Content report semi-annually. These reports are due within 30 days of the end of the 6-month period. The Fuel Oil Sulfur Content report shall contain the following information:
    i. Calendar dates covered in the reporting period;
    ii. Each 30-day average sulfur content (weight percent);
    iii. Reasons for any noncompliance with the standards and any corrective action taken.
I. The following address for EPA shall be used for any reports or notifications required to be copied to them:

Compliance Clerk
USEPA Region 1
1 Congress Street
Suite 1100
Boston, MA 02114-2023

(20) **Continuous Opacity Monitors**

If any continuous opacity monitoring system is recording accurate and reliable data less than 95% of the source-operating time within any quarter of the calendar year, the Department may initiate enforcement action and may include in that enforcement action any period of time that the continuous emission monitoring system was not recording accurate and reliable data during that quarter unless the licensee can demonstrate to the satisfaction of the Department that the failure of the system to record accurate and reliable data was due to the performance of established quality assurance and quality control procedures or unavoidable malfunctions.

(21) **Emergency Generators**

A. B&M shall limit each of the emergency generators to 500 hr/yr of operation (based on a 12-month rolling total). An hour meter shall be installed and operated on each emergency generator.

B. These generators are only to be operated for emergencies, as defined in this document, and as needed for routine maintenance of the generator itself. A log documenting the dates, times, and reason of operation for the emergency generators shall be kept.

C. The emergency generators shall fire diesel fuel with a sulfur limit not to exceed 0.05% by weight. Fuel records, including percent sulfur, shall be maintained.

D. Emissions shall not exceed the following:

Equipment		**PM**	**PM_{10}**	**SO_2**	**NO_x**	**CO**	**VOC**
Generator #1	lb/hr	0.09	0.09	0.04	3.22	0.69	0.26
Generator #2	lb/hr	0.27	0.27	0.11	9.88	2.13	0.78

E. Visible emissions from the emergency generators shall not exceed 20% opacity on a 6-minute block average, except for no more than (2) six-minute block averages in a continuous 3-hour period.

(22) **Safety Kleen Parts Cleaners**

B&M shall label each parts washer with operational standards, equip the washer with cover if the vapor pressure is >15 mmHG at 100°F, close cover when not in use, drain parts for 15 seconds or longer, keep drafts < 40 m/minute, repair leaks, and keep records of solvent added and removed. B&M shall not degrease porous material.

(23) B&M shall notify the Department within 48 hours and submit a report to the Department on a quarterly basis if a malfunction or breakdown in any component causes a violation of any emission standard (Title 38 MRSA §605-C).

(24) **Annual Emission Statement**
In accordance with MEDEP Chapter 137, the licensee shall annually report to the Department the information necessary to accurately update the State's emission inventory by means of:

1) A computer program and accompanying instructions supplied by the Department;

   or

2) A written emission statement containing the information required in MEDEP Chapter 137.

Reports and questions should be directed to:

Attn: Criteria Emission Inventory Coordinator
Maine DEP
Bureau of Air Quality
17 State House Station
Augusta, ME 04333-0017

Phone: (207) 287-2437

The emission statement must be submitted by September 1.

(25) B&M shall pay the annual air emission license fee within 30 days of July 31st of each year. Pursuant to Title 38 M.R.S.A. Section 353-A, failure to pay this annual fee in the stated time frame is sufficient grounds for revocation of the license under 38 M.R.S.A. Section 341-D, Subsection 3.

(26) The term of this Order shall be for five (5) years from the signature below.

DONE AND DATED IN AUGUSTA, MAINE THIS DAY OF 2002.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY:_____
MARTHA G. KIRKPATRICK, COMMISSIONER

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: 4/8/02
Date of application acceptance: 4/9/02

Date filed with the Board of Environmental Protection: _____

This Order prepared by Lynn Ross, Bureau of Air Quality.